

Use Attainability Analysis
for
Water Body Identification # 1611
Wolf Creek

Conducted by:
Environmental Resources Coalition

To:
Missouri Department of Natural Resources
Water Protection Program

Submitted: July 14, 2005



Stream Description – WB ID: 1611 – Wolf Creek

Wolf Creek (WB 1611) is a three mile Class C stream. The water body is located in eastern Warren County in the Ozark Border physiographic region (Thom and Wilson 1980). The Ozark Border physiographic region includes the rugged river hills with deep, relatively productive soils along both sides of the Missouri River and extends along the lower Mississippi River on the eastern border of the state to the Mississippi Lowlands physiographic region. The Missouri River Section of the Ozark Border region is characterized by streams flowing to the Missouri River. The dominant topography of the region is highly dissected gentle rolling plains. Soils range from deep productive loess soils to shallow soils derived from bedrock.

Wolf Creek is the receiving water body for the Lake Sherwood Estates Lagoon (MO0094529). The classified reach runs from just north of the upper most end of Wolf Creek Road (site # 1) and flows southwest to the confluence with Tuque Creek. The effluent from the Lake Sherwood Estates Lagoon enters Wolf Creek upstream of site # 1. Two sites of the stream were assessed for physical characteristics, and approximately 1.3 miles were walked and assessed between these two sites. During this assessment, the surveyor did find several areas with sufficient maximum depth to support whole body contact recreation (maximum depth of at least one meter.) Primary surroundings include farm fields and wooded areas.

Thom, R. H. and J. H. Wilson. 1980. The Natural Divisions of Missouri. Trans. Mo. Acad. Sci. 14: 9-23.

Note: During the first visit to each site, ERC selected an assessment location (either upstream or downstream) based on which side appeared deepest and or most likely for whole body recreation.

Field Data Sheets for Recreational Use Stream Surveys

Data Sheet A: Water Body Identification

Water Body Name: Wolf Creek
8 – digit HUC: 10300200
Missouri WBID # 1611
County: Warren
Upstream Legal Description: Sec. 14, T45N, R1W, Warren County
Downstream Legal Description: Sec. 22, T45N, R1W, Warren County
Upstream Coordinates: Latitude 38.6587994° N , Longitude 91.0003802° W
Downstream Coordinates: Latitude 38.6438398 ° N , Longitude 91.0186626 ° W
Discharger Facility Name(s): Lake Sherwood Estates Subdivision
Discharger Permit Number(s): MO0113948
Number of Sites Evaluated: 2
Name of Surveyor and Telephone Number: Robert R. Bacon, (573) 634-7078
Organization: Environmental Resources Coalition (ERC)
Position: Director of Aquatic Services

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on this UAA sheet is true and accurate.

Signed: Robert R. Bacon

Date: 7-14-2005

Weather Conditions

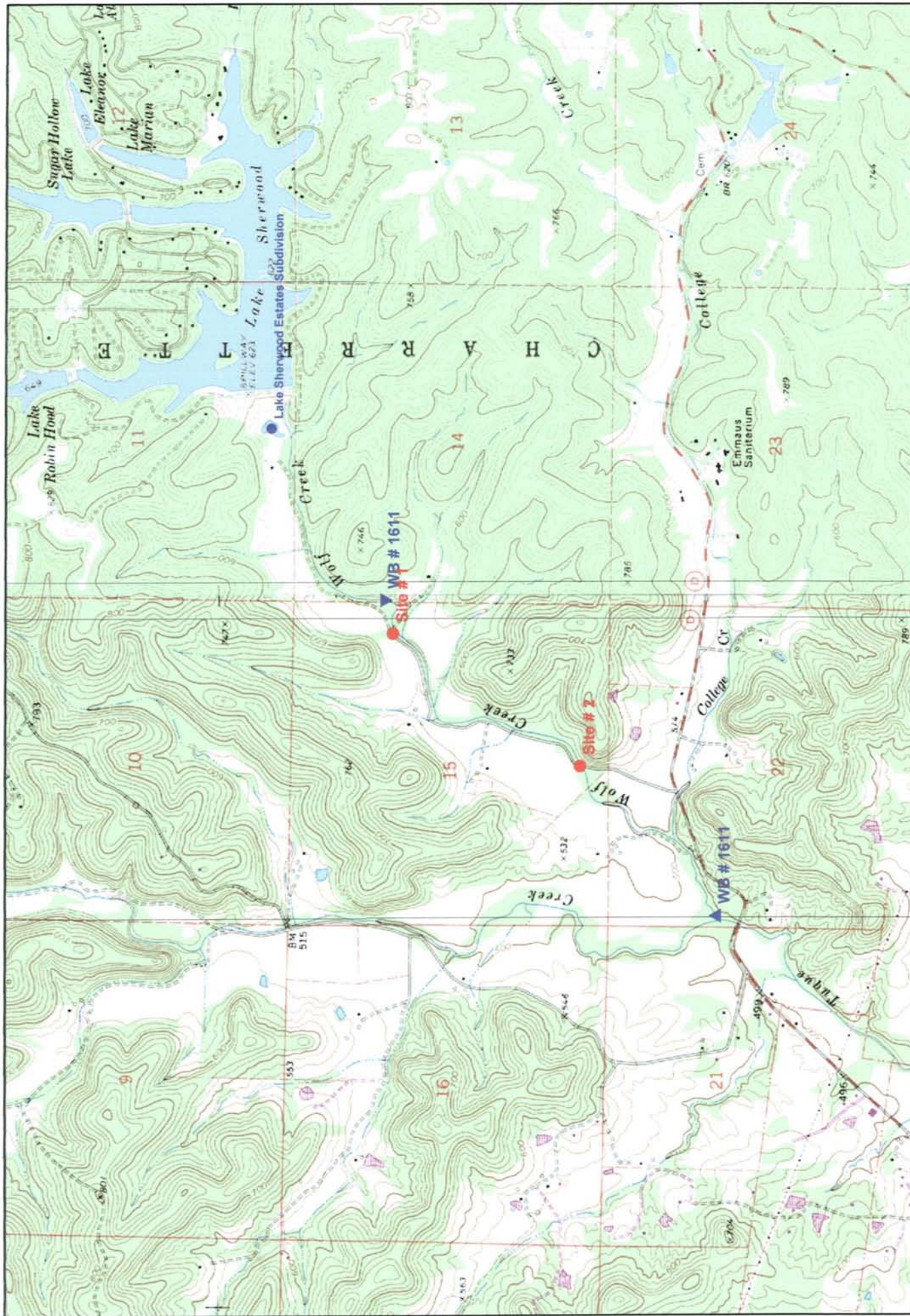
Weather conditions for the field surveys and the previous ten days are listed in the tables below.

Data from the Midwestern Regional Climate Center
Washington, MO, Station ID: 238746

Date	Precipitation (Inches)	Min. Temp (°F)	Max. Temp (°F)	Average Temp (°F)
05/07/2005	0	51	82	67
05/08/2005	0	57	82	70
05/09/2005	0.02	61	82	72
05/10/2005	Trace	58	87	73
05/11/2005	0	60	86	73
05/12/2005	0.01	57	84	71
05/13/2005	Trace	58	80	69
05/14/2005	0.34	56	72	64
05/15/2005	0.01	42	65	54
05/16/2005	0	40	70	55
05/17/2005	0	42	77	60

Date	Precipitation (Inches)	Min. Temp (°F)	Max. Temp (°F)	Average Temp (°F)
05/29/2005	0.08	54	79	67
05/30/2005	0.07	58	78	68
05/31/2005	Trace	60	81	71
06/01/2005	0	56	82	69
06/02/2005	0	57	79	68
06/03/2005	Missing	58	84	71
06/04/2005	0	60	91	76
06/05/2005	0.1	68	89	79
06/06/2005	0	63	85	74
06/07/2005	0.15	64	89	77
06/08/2005	0	65	91	78

* Missing indicates that data was not available from the Midwestern Regional Climate Center.



Name: MARTHASVILLE
Date: 7/13/2005
Scale: 1 inch equals 2000 feet

Location: 038.6555664° N 091.0037891° W

WB # 1611 – Wolf Creek

Site # 1 - Wolf Creek Road – at the end of the road

GPS Location

38.6587282 North

91.0022793 West

Elevation (feet)

593.3

Upstream Views

05/17/05



06/08/05



Downstream Views

05/17/05



06/08/05



Physical Dimensions – Site # 1

	05/17/05	06/08/05
Assessment Location	Upstream	Upstream
Time	3:17 PM	2:23 PM
Stream Type	Run	Run
Width (m)	4.88	5.03
Length (m)	30.48	30.48
Ave Depth (cm)	16.53	14.56
Maximum Depth (cm)*	31.0	31.0
Flow Present	Yes	Yes
Flow (cfs)	-	-

SUBSTRATE

Cobble	0%	0%
Gravel	100%	100%
Sand	0%	0%
Silt	0%	0%
Mud / Clay	0%	0%
Bedrock	0%	0%
	100%	100%

OTHER

Uses Observed	None	None
Evidence of Human Use (WBCR)	None	None
Aquatic Vegetation	None	80% Periphyton
<i>Water Characteristics</i>		
Odor	None	None
Color	Turbid	Turbid
Bottom Deposits	Fine sediments	Periphyton
Surface Deposits	Scum	Foam

* Maximum depth is the maximum measured depth within the stream cross-section .

NOTES: Site # 1 is the uppermost site on Wolf Creek.

WB # 1611 – Wolf Creek

Site # 2 - Wolf Creek Road – County Road Bridge

GPS Location

38.6500453 North

91.0099349 West

Upstream Views

05/17/05



06/08/05



Downstream Views

05/17/05



06/08/05



Physical Dimensions – Site # 2

	05/17/05	06/08/05
Assessment Location	Upstream	Upstream
Time	3:55 PM	2:36 PM
Stream Type	Run	Run
Width (m)	6.10	5.64
Length (m)	91.44	91.44
Ave Depth (cm)	7.60	6.65
Maximum Depth (cm)*	13.0	11.0
Flow Present	Yes	Yes
Flow (cfs)	-	-

SUBSTRATE

Cobble	0%	0%
Gravel	100%	100%
Sand	0%	0%
Silt	0%	0%
Mud / Clay	0%	0%
Bedrock	0%	0%
	100%	100%

OTHER

Uses Observed	None	None
Evidence of Human Use (WBCR)	None	None
Aquatic Vegetation	Periphyton	Periphyton
<i>Water Characteristics</i>		
Odor	None	None
Color	Clear	Clear
Bottom Deposits	Periphyton	Periphyton / black scum
Surface Deposits	Scum	None

* Maximum depth is the maximum measured depth within the stream cross-section

NOTES:

05/17/05 - Three locations between site 1 and site 2 had a maximum depth over one meter.

Site Descriptions

Site #1: Site #1 of Wolf Creek is located at the end of Wolf Creek Road on private property, and is the uppermost site of the reach. Forest and open fields surround the stream at this site. Some of the landowners maintained mowed area to create a park-like setting right up to the stream bank.

Site #2: Site #2 of Wolf Creek is located at the county road bridge on Wolf Creek Road. Wooded areas and the county road surround the stream at this site. The assessor walked 1.2 miles of the stream between sites #1 and #2. It was recorded that at least three spots reach over one meter in depth. Some of the landowners maintained mowed area to create a park-like setting right up to the stream bank.

There were only two assessment sites established on Wolf Creek because the classified reach is a relatively short reach and because 60 percent of the classified reach was walked by assessment team. During this walking assessment, several locations were found between site 1 and site 2 which exceeded one meter in depth.

I, the undersigned, hereby affirm to the best of my knowledge, that all information reported on the UAA datasheets, are true and accurate.

Signed: Robert D. Bacon

Date: 7-14-2005

Organization: ERC

Position: Dir of Aquatic Services

Summaries of Interviews

The following interviews were conducted by Abby Welschmeyer and Anna Welschmeyer with landowners and creek users during the month of June of 2005. Questions were asked of the interviewee either in person or over the phone, and survey sheets were completed based on the information acquired by the interviewer. The questions asked are as follows:

- How long have you lived near this body of water?
- Do you or your family utilize this body of water for recreational activities?
- If not used, why?
- If used, what types of activities, what season, how many times per period, and what flow conditions (low, medium, or high)?
- Have you witnessed other people utilizing the water body? (If so, the aforementioned questions apply.)

To assist in the collection of interviews, letters were developed detailing the water quality rule, our affiliation with the Missouri Department of Natural Resources and our contact information. These letters were left at residences nearby the water body where no one answered the door. This turned out to be a very effective way of quickly collecting key interviews of people most familiar with the resource.

Date: 06/21/05

Time: 8:37 AM

Name: Pamela Sue Mabrey

Reason for interview: owns land along water body – phone interview (contacted Abby)

Pamela Sue Mabrey has owned land along Wolf Creek for 38 years. She stated that she and her family use the water body for swimming, wading, and fishing frequently during the summer months. Ms. Mabrey said there are several holes that are four to five feet deep in which her children are able to put their heads under the water. She commented that people who live along the stream go there everyday to recreate. She has seen people swimming, fishing, and wading almost every day during the summer months.

Date: 06/16/05

Time: 10:33 AM

Name: Mary Ann Diener

Reason for Interview: lives along water body /owns a campground – phone interview

Mary Ann Diener has lived near Wolf Creek for 15 years. She said she uses the stream for swimming, wading, and fishing on holidays during the summer months. Ms. Diener stated that there are several holes that are about 4 ½ feet deep in which one could put their head under water, but most of the stream is 1-2 feet deep. She commented that her sister babysits several children and takes them to the stream to play regularly. She said she has seen people swimming and wading in the stream frequently in the summer.

Summaries of Interviews (cont'd)

Date: 06/16/05

Time: 10:05 AM

Name: Diane Mittler

Reason for Interview: lives just below Lake Sherwood – phone interview

Diane Mittler has lived near Wolf Creek for five years. She stated that she and her family do not use the stream near her house because she lives very near the lagoon and the water is 'gross'. They do, however, frequently go farther down on the creek to swim, wade, and fish. She commented that there are several holes that are 3-4 feet deep. Ms. Mittler stated that she has seen people swimming and wading in the stream during the summer months, and that a local church youth group comes out to swim often. She commented that she believes not many people know that the lagoon dumps into the stream.

Date: 06/16/05

Time: 7:02 AM

Name: Paul and Rita Crombie

Reason for Interview: live along water body – phone interview

Paul and Rita Crombie have lived near Wolf Creek for ten years. They live close to Lake Sherwood where there are holes that are over one meter deep. Mr. and Mrs. Crombie stated that they use the stream for swimming and wading several times during the summer months, but do not want their children putting their faces in the water. They commented that mainly their children use the creek, and for that reason they want to see the water cleaned up. They said they have seen people swimming and wading in the water body several times during the summer months.

Date: 06/29/05

Time: 4:37 PM

Name: Lloyd Miesner

Reason for Interview: owns land near water body – phone interview

Lloyd Miesner has lived near Wolf Creek for 29 years. He does not use the stream for recreation because he has a lake. Mr. Miesner stated that he hasn't actually seen anyone in the stream, but assumes it is used. He has seen several people fishing from the banks of the water body during the summer months.

Summaries of Interviews (cont'd)

Date: 06/15/05

Time: 3:31 PM

Name: Randy and Lori Kleekamp

Reason for Interview: lives near site # 2 – phone interview

Randy and Lori Kleekamp have lived near Wolf Creek for three years, and own approximately ¼ mile along the stream. They use the stream for swimming, wading, and fishing almost every day during the summer months, and said that there are several spots that reach 4-5 feet in depth. Mr. and Mrs. Kleekamp commented that they have seen people swimming, fishing, and wading in the water body many times during the summer. They also said that they have seen people camp beside the stream.

Date: 06/08/05

Time: 3:30 PM

Name: Steve Goll

Reason for Interview: lives near site # 2

Steve Goll has lived near Wolf Creek for 42 years, and does not use the stream for recreation because the Lake Sherwood Estates Lagoon discharges into it. He stated that there are no holes deep enough for fish to live because no one is allowed to take gravel from the creek and those holes have filled in. He also believes the nitrogen levels are high in the creek due to the lagoon because many plants grow in it now. Mr. Goll stated that he has heard the neighbor children at the stream, and has seen a few of them wading during the summer months.